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According to Bridget A. Kriner, Karie A. Coffman, Anthony C. Adkisson, Paul G. Putman, and Catherine H. Monaghan (2015) a Community of Practice (COP) “is a potential learning strategy combining self-directed with collaborative learning” (p. 73). I perceive COPs being created by like minded individuals who are working toward a common goal or passion. Personal Learning Communities (PLC) and Personal Learning Networks (PLN) definitely come to mind when I think about COPs. COPs can exist at any age group. Launa Gauthier (2016) looked at how to redesign educational opportunities for student success and found that they way to accomplish this was through cultivating communities of practice. Gauthier (2016) stated that “Learning emerge[d] from the interactions people have during the pursuit of a joint practice and as they negotiate the meaningfulness of what they are doing” (p.5). The primary goal of a COP is to create a community where learning occurs in a social context through the involvement of its members. The members of these communities are seen as practitioners who actively contribute knowledge, time, experience, as well as resources to create a center, or an organization, of some form of capital as established by the group. “Within a community of practice people also develop, negotiate, and share personal ways of understanding the world; they experience a form of social learning. Such social interaction forms the basis of a common bond that helps to establish a group identity and a sense of shared value to the learning that occurs within the group” (Gauthier, 2016, p.7). COP benefits learners by the way it engages them, by the way it presents learners with opportunities to communicate, by the way it keeps people accountable, and by the way it provides learners with extra resources to build knowledge and troubleshoot.. In order to foster the growth of COPs, educators should be more learner focused and be more of a facilitator rather than lead a teacher-centered learning environment. To create an environment conducive of COPs, educators need to create opportunities for students where they are free to be explorers, are held accountable for their contributions (or their lack of contributions), are given guided freedom, and are encouraged to trust one another in their COPs.

Creating and Testing the Learning Game

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Abstract

This paper discusses the use of games and simulations in education. The simulation design and model will demonstrate how it promotes engagement, communication and collaboration among learners. In addition to discussing how games and simulations are utilizes in the classroom, a sample modeling simulation is presented and explained thoroughly.

A Modeling Simulation of the Institutional Review Board

The use of games and simulations in teaching and learning has been increasing with the increasing focus on education technology. Some of the benefits of implementation of games and simulations have been an increase in student motivation and engagement; an enhancement of problem-solving skills, peer learning, and collaboration; a facilitation of language acquisition; a stimulation of information assimilation and acquisition among others (Justice and Ritzhaupt, 2015, p.87). Although there are numerous benefits to implementing technology based games and simulations, there are also many obstacles and barriers such as cost and access. This paper will introduce a way to use game and simulation theory in an environment that does not have access to the type of technology necessary to conduct technology based games and simulations. The course for which this simulation is designed for has the objective and goal of growing the technology literacy and practice of its learners in an effort to get them to be more College and Career Ready in terms of utilizing technology as part of the learning process.

About the Learners and the Learning Environment

The course for which this simulation is designed for is a hybrid Psychology I course, a college preparatory elective course, for juniors and seniors in a public high school in a small rural town in Michigan. The learning environment of the district and school building, along with the private home lives of the learners, does not promote much technology use. The purpose of designing a hybrid course model is so these students, who have had little to use of technology in their education journey might have some familiarization and practice prior to transitioning into the college and career realm where technology is a tool used regularly. Due to the hybrid design of the course, learners will participate in this modeling simulation on multiple levels ranging

from independently without technology, independently with technology, collaboratively without technology, as well as collaboratively with technology. The process of this simulation is intended to scaffold the both of the content as well as the technology aspect of learning.

Purpose of the Game and the Use of the Modeling Simulation Model

As part of the learning goals in the Hybrid Psychology I course, learners will come to recognize the discipline of psychology as a science and demonstrate the ability to practice and apply the principles and concepts of psychology. Learners will also be working towards identifying the style, format, and structure of the American Psychological Association (APA), which in this simulation means the APA's Code of Ethics. The course map of the course can be accessed here (http://bit.ly/2pqJLBt).

A modeling simulation model where learners construct knowledge by taking on the role of a decision maker in the simulation was used for an activity to get learners to better understand the APA's Code of Ethics and how the IRB operates in terms of making the decision to approve or decline a research proposal (Kesner, 2014, p.13). This type of simulation allows the learner to sit in the seat to refer to the learning material, to use the material, and to practice it all in the process of making the information stick. Modeling simulations are relevant and provide learners with first hand experience and practice as they work towards constructing a deeper understanding and knowledge of the content material.

The Simulation: The Benefits, Theories, Practices, and its Objectives

In the traditional classroom time of the hybrid course, students are first taught the different components of the APA's Code of Ethics and the process by which they review research proposals. They are given the checklist as to what they measure in determining whether a

research proposal should proceed into the experiment phase. The first step to this modeling simulation is for each individual student to practice implementing the concepts they learned. Students will receive the IRB Modeling Sim (http://bit.ly/2pk4BPI) packet and be instructed to independently read through each of the research proposals and think about whether they would approve or decline the proposal and based on what justification. By giving them time to process the research proposals independently ensures that the learners are given and taking the opportunity to see what they know on their own and see what they need from others to understand better. This is a type of self-assessment used to check for understanding and it serves as a point of conversation when learners get into their social learning groups. This process supports the social constructivist learning theory of Lev Vygotsky as learners are able to figure out what they know on their own and what they need the support from a More Knowledgeable Other (MKO) to better construct their knowledge (Cicconi, 2014, p.58).

Upon assessing what they know and understand without the social learning environment, learners can then enter into a dialogue with other learners to to better understand the concepts, theories, and practices associated with the APA's Code of Ethics and the IRB's process of approving and declining research proposals. In this phase of the simulation, the learners are working collaboratively without the use of technology. They are still working on their understanding as they each bring in their own frame of reference and understanding using the language they learned to try and arrive at a better understanding. As the work through the content in their social learning environments, the group serves as the MKO that scaffolds the individual learners to various higher points of understanding the content as Vygotsky explained occurs in the Zone of Proximal Development (ZPD) (Cicconi, 2014, p.58). As the learners converse and

practice the language of the Code of Ethics and discuss each research proposal, they are building and expounding on their understanding and application of the lesson.

Once the group feels they collectively have a sound understanding of whether or not to approve each of the proposals, they will be guided into the portion where they will collaboratively work to create a technology presentation about one of the research proposals. The invitation for learners to engage in this modeling simulation is found through this storyboard creation (http://bit.ly/2q9I0IB). The simulation calls for learners to set up a scenario where they play the role of the committee members of the IRB to thoroughly discuss the proposal as they use the APA's Code of Ethics to guide their discussion. Groups must video record their conversation as they role play being a member of the committee that ultimately decides the fate of the researches presented. Groups must end their videos with a decision as to whether or not they choose to approve or decline the research proposal. This portion of the simulation allows learners to construct knowledge through a form of play learning, which is another component of Vygotsky's social constructivist approach to learning (Cicconi, 2014, p.58). These modeling simulations are scenario based education opportunities developed to have learners immerse themselves in a situation to create context and construct knowledge and understanding through experience (Misfeldt, 2015, p.183). These videos are to be posted on the class website and students are then charged with the task of watching the videos of other groups and see if they agree or disagree with the conversation.

Students are to watch the videos of other groups independently to self assess how much they truly understand the components of the APA's Code of Ethics and how it is used to make decisions on research proposals. Students will be expected to independently process whether

they agree or disagree with the group. There are many ways of having students present their final reflections. At first, students might be asked to write it on a blog post or discussion boards to get them more familiar with their electronic portfolios or discussion boards. If more technology can be introduced and made more accessible, students might even be asked to join a role playing simulation and record their role playing simulation. Learners can even be asked to create avatars through Voki or GoAnimate if those are available and post those avatars as responses to the videos they watched. This step supports the social constructivist learning approach as it supports the social learning aspect prior to the individual learning aspect, as "Social constructivism is grounded in the idea that learning occurs first socially and, only after, internally" (Karahan and Roehrig, 2014, p.105). This final step serves as a post-reflection or post-interview where learners are sharing what they understood and what they might still be struggling with. This offers the facilitator with data on what can be clarified to the community of learners.

How the Game is Played

The class will be divided into teams of five, which is the number of individuals that serve on the IRB. They are invited to the challenge of helping to meet the deadline of reviewing research proposals through this storyboard invitation (http://bit.ly/2q9I0IB). Students already have the packet of research proposals (http://bit.ly/2pk4BPI) because they independently went through this on their own, but they will be using the proposals again to decide whether to approve or decline each research proposal based on the information given and the APA's Code of Ethics.

The groups will discuss their individual thoughts for each of the research proposals and work together to gain a deeper knowledge and understanding of the research proposals and how

to apply the APA's Code of Ethics. Each group will be assigned one proposal for which they will have to create and record a simulation where they thoroughly discuss the research proposal and decide the fate of the proposal using the APA's Code of Ethics. Upon completion of the video presentation, one member of every group will upload the video to the class website.

As the final reflection and final check for understanding, every individual student will be expected to watch the video presentations of the other groups and determine whether they agree or disagree with that group's final decision. Students can either post this on their blogs, the discussion boards, or create avatars to share their thinking. Students can also use their final reflection as a way to share what they understand and what they need clarification or practice on to provide data for the facilitator.

Winners and Losers

No losers are present in this simulation. All participants gain a better understanding of the content. There will however be a winning group and that will be determined by how well they combed through the APA's Code of Ethics and how much they used its language in their modeling simulation to arrive at their decision. The group who presented the most thorough simulation will be awarded a couple of extra credit points. There will also be two to three winning students. These students will be chosen based on their post simulation reflection and analysis on the videos created by other groups. The winning students are the ones who show a deep understanding of the content and show this process in their analysis. These students will also be awarded a couple of extra credit points.

Conclusion

Social constructivism is "a highly effective method of teaching that all students can benefit from, since collaboration and social interaction are incorporated" (Powell & Kalina, 2009, 248). Games and simulations also offer learners the same highly effective method of teaching as it guides students to construct knowledge through their interaction and collaboration with one another. These social interactions not only motivate and encourage students to actively engage in their own learning process, but it also allows them to experience and authentic opportunity that can be used to deepen understanding and transform learning. Both the social constructivist learning model and the use of games and simulation emphasize "the role of others, or the social context, ...[and it has] pushed educators to reexamine the extent to which learning is an individual process (Jones & Brader-Araje, 2002, p. 12). Because of the fact that "simulations are simplified versions of reality… [they carry the potential for learners] to explore different approaches, test diverse strategies, experience various outcomes, and build a better overall understanding of key aspects of the real world" (Shapira-Lishchinsky, 2014, p. 3). This type of collaboration provide learners experience on how to solve problems by exploring options and making decisions as they receive immediate feedback from their peers in their role-playing simulation.

While there are numerous of obstacles, such as funding and accessibility, to keep teachers away from using games and simulations for learning purposes, studies demonstrate that "simulations promote constructivist learning through engaging participants' psychomotor, affective and cognitive learning domains, which tend to result in a deeper and more memorable

experience" and it is therefore an untapped resource to further the construction of knowledge and understanding among students (Shapira-Lishchinsky, 2014, p. 4).

Simulations have not only an impact, but a lasting impact as learners associate muscle memory or experience to learning. Games and simulations have the potential to present authentic learning experiences for learners and should be incorporated more into teaching and learning practices. For instance, students who engage in this modeling simulation are more likely to remember the strands of the APA's Code of Ethics than their counterparts who just memorized the strands because they authentically used it in determining the fate of research proposals. They internalized it as they practiced and are more so apt to remember it than their counterparts.

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